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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,687	04/11/2001	Thomas Hamm	US20-00-1939	1882
7590	04/19/2004		EXAMINER	
Paul D. Greeley, Esq. Ohlandt, Greeley, Ruggiero & Perle, L.L.P. One Landmark Square, 10th Floor Stamford, CT 06901-2682				LEE, SEUNG H
		ART UNIT	PAPER NUMBER	2876

DATE MAILED: 04/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/832,687	HAMM ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Seung H Lee	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 18 December 2003.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-21 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____ .  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/08/2003</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____ .                                  |

## DETAILED ACTION

1. Receipt is acknowledged of the response filed on 18 December 2003, which has been entered in the file.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kunselman et al. (US 5,436,723, of the record)(hereinafter referred to as 'Kunselman') in view of Quinn (US 5,510,273).

Kunselman teaches a spectro-analytical system comprising an imaging device or structure (8) having a reflective grating device (16) for imaging a light or an incident beam onto the photo-multiplier sensors (20A-H) in which serves as photodiode line disposed along Rowland circle (22) (see Fig. 1; col. 2, line 67- col. 3, line 27).

However, Kunselman fails to teach or fairly suggest that the system includes a support mount element having a shape corresponding to the focal surface and a flexible sensor array.

Quinn teaches a process for manufacturing chip array comprising a flexible substrate (10) serving as a support element and an array of chips (12a-12z) is mounted

on the substrate wherein the array of chips can be a CCD and/or photosensitive semiconductors, the array mounted on the substrate is serving as a flexible sensor array in which is having a concave shape, the array of chips having two ends or points that located on the edge of array (12a and 12 z)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Quinn to the teachings of Kunselman in order to provide an improved and an enhanced system means wherein installing of the CCD image sensor on the non-planar surface such as Rowland Circle would illuminate the unwanted weight to the system since the input light is immediately directed to the CCD image sensor. Moreover, such modification would improve a readability means for detecting signals precisely using the CCD image sensors, and therefore an obvious expedient. Although, Kunselman as modified by Quinn fails to teach or fairly suggest that the thickness of the flexible structure range from 1 micrometer to 0.1 millimeters, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the thickness of the substrate of Quinn to adjust the size of the spectrometer, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), failing to provide any unexpected results.

***Response to Arguments***

4. Applicant's arguments filed 18 December 2003 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., silicon chips are not flexible) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In response to the applicant's argument that the sensor or semiconductor array is flexible, the Examiner interprets the above limitation given its broadest reasonable interpretation wherein the chips (12) that are mounted on the flexible substrate (10) as taught by Quinn meets the claimed invention, due to the fact that the array of sensor or semiconductor is attached to the flexible substrate.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, a secondary reference to Quinn teaches that the flexible substrate having a radius of curvature when

the working surface is defining a concave bow (see claim 1 of Quinn). Therefore, it would have been an obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Quinn to the teachings of Kunselman as discussed in paragraph 3 above.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Seung H. Lee** whose telephone number is (571) 272-2401. The examiner can normally be reached on Monday to Friday from 7:30 AM to 4:00 PM.

Art Unit: 2876

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee, can be reached on (571) 272-2398. The fax-phone number for this group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [[seung.lee@uspto.gov](mailto:seung.lee@uspto.gov)].

*All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.*

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

  
Seung H. Lee  
Art Unit 2876  
April 4, 2004

  
MICHAEL G. LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800